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Sheridan

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(54) **STAR GEAR SYSTEM WITH LUBRICATION CIRCUIT AND LUBRICATION METHOD THEREFOR**

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(58) **Field of Search** **475/159; 74/467, 74/468; 184/6.12**

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(57) **ABSTRACT**

A star configured epicyclic gear train includes a sun gear 10, a plurality of star gears 16 supported on bearings 18, a ring gear 51 and a set of baffles 44 disposed between the star gears. A single lubricant circuit serves as the exclusive means for supplying lubricant successively to the bearings, the sun/star mesh and the star/ring mesh. A variant of the gear system includes an auxiliary lubricant circuit featuring a set of spray bars 82 for supplying lubricant to the sun/star mesh and the star/ring mesh. The primary and auxiliary circuits share a common lubricant discharge path representing the exclusive means for evacuating both the primary and auxiliary lubricant from the gear system. Preferably, the auxiliary lubricant circuit is selectively operable. The inventive gear system addresses a number of difficulties related to lubricating and evacuating lubricant from a star configured epicyclic gear system.

15 Claims, 5 Drawing Sheets

